



## SEQUENCE LISTING

<10> Ish-Horowicz, David  
Henrique, Domingos Manuel Pinto  
Lewis, Julian Hart  
Artavanis Tsakonas, Spyridon  
Gray, Grace

<120> ANTIBODIES TO VERTEBRATE DELTA PROTEINS  
AND FRAGMENTS

<130> 7326-122-999

<140> 09/783,931

<141> 2001-02-15

<150> 08/981,392

<151> 1997-12-22

<150> PCT/US96/11178

<151> 1996-06-28

<150> 60/000,589

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<170> FastSEQ for Windows Version 4.0

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<223> Chick Delta (C-Delta-1) gene

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 <213> Xenopus

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Val Asn Lys Lys Gly Leu Leu Gly Asn Met Asn Cys Cys Arg Pro Gly
35          40          45
Ser Leu Ala Ser Leu Gln Arg Cys Glu Cys Lys Thr Phe Phe Arg Ile
50          55          60
Cys Leu Lys His Tyr Gln Ser Asn Val Ser Pro Glu Pro Pro Cys Thr
65          70          75          80
Tyr Gly Gly Ala Val Thr Pro Val Leu Gly Thr Asn Ser Phe Val Val
85          90          95
Pro Glu Ser Ser Asn Ala Asp Pro Thr Phe Ser Asn Pro Ile Arg Phe
100         105         110
Pro Phe Gly Phe Thr Trp Pro Gly Thr Phe Ser Leu Ile Ile Glu Ala
115         120         125
Ile His Ala Asp Ser Ala Asp Asp Leu Asn Thr Glu Asn Pro Glu Arg
130         135         140
Leu Ile Ser Arg Leu Ala Thr Gln Arg His Leu Thr Val Gly Glu Gln
145         150         155         160
Trp Ser Gln Asp Leu His Ser Ser Asp Arg Thr Glu Leu Lys Tyr Ser
165         170         175
Tyr Arg Phe Val Cys Asp Glu Tyr Tyr Tyr Gly Glu Gly Cys Ser Asp
180         185         190
Tyr Cys Arg Pro Arg Asp Asp Ala Phe Gly His Phe Ser Cys Gly Glu
195         200         205
Lys Gly Glu Lys Leu Cys Asn Pro Gly Trp Lys Gly Leu Tyr Cys Thr
210         215         220
Glu Pro Ile Cys Leu Pro Gly Cys Asp Glu His His Gly Tyr Cys Asp
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Lys	Pro	Gly	Glu	Cys	Lys	Cys	Arg	Val	Gly	Trp	Gln	Gly	Arg	Tyr	Cys	
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Pro	Trp	Gln	Cys	Asn	Cys	Gln	Glu	Gly	Trp	Gly	Gly	Leu	Phe	Cys	Asn	
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Gln	Asp	Leu	Asn	Tyr	Cys	Thr	His	His	Lys	Pro	Cys	Glu	Asn	Gly	Ala	
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Thr	Cys	Thr	Asn	Thr	Gly	Gln	Gly	Ser	Tyr	Thr	Cys	Ser	Cys	Arg	Pro	
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Gly	Tyr	Thr	Gly	Ser	Asn	Cys	Glu	Ile	Glu	Val	Asn	Glu	Cys	Asp	Ala	
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Asn	Pro	Cys	Lys	Asn	Gly	Gly	Ser	Cys	Ser	Asp	Leu	Glu	Asn	Ser	Tyr	
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Thr	Cys	Ser	Cys	Pro	Pro	Gly	Phe	Tyr	Gly	Lys	Asn	Cys	Glu	Leu	Ser	
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Ala	Met	Thr	Cys	Ala	Asp	Gly	Pro	Cys	Phe	Asn	Gly	Gly	Arg	Cys	Ala	
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Asp	Asn	Pro	Asp	Gly	Gly	Tyr	Ile	Cys	Phe	Cys	Pro	Val	Gly	Tyr	Ser	
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Gly	Phe	Asn	Cys	Glu	Lys	Lys	Ile	Asp	Tyr	Cys	Ser	Ser	Asn	Pro	Cys	
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Ala	Asn	Gly	Ala	Arg	Cys	Glu	Asp	Leu	Gly	Asn	Ser	Tyr	Ile	Cys	Gln	
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Cys	Gln	Glu	Gly	Phe	Ser	Gly	Arg	Asn	Cys	Asp	Asp	Asn	Leu	Asp	Asp	
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Cys	Thr	Ser	Phe	Pro	Cys	Gln	Asn	Gly	Gly	Thr	Cys	Gln	Asp	Gly	Ile	
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Asn	Asp	Tyr	Ser	Cys	Thr	Cys	Pro	Pro	Gly	Tyr	Ile	Gly	Lys	Asn	Cys	
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Thr	Cys	His	Glu	Arg	Asn	Asn	Arg	Tyr	Val	Cys	Gln	Cys	Ala	Arg	Gly	
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Tyr	Gly	Gly	Asn	Asn	Cys	Gln	Phe	Leu	Leu	Pro	Glu	Glu	Lys	Pro	Val	
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Pro	Trp	Ile	Ala	Val	Cys	Ala	Gly	Ile	Val	Leu	Val	Leu	Met	Leu	Leu	
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Asn	Leu	Ala	Asn	Cys	Gln	Arg	Glu	Lys	Asp	Ile	Ser	Val	Ser	Phe	Ile	
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Glu	Ser	Asn	Asn	Glu	Lys	Asn	Gly	Tyr	Lys	Pro	Arg	Tyr	Pro	Ser	Val	
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Glu	Arg	Ser	Lys	Cys	Glu	Ala	Lys	Cys	Ser	Ser	Asn	Asp	Ser	Asp	Ser	
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Glu	Asp	Val	Asn	Ser	Val	His	Ser	Lys	Arg	Asp	Ser	Ser	Glu	Arg	Arg	
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Arg	Pro	Asp	Ser	Ala	Tyr	Ser	Thr	Ser	Lys	Asp	Thr	Lys	Tyr	Gln	Ser	
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 <212> PRT  
 <213> Drosophila

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 Phe Ser Asn Asp His Gly Arg Asp Asn Glu Gly Arg Cys Cys Ser Gly  
 35 40 45  
 Glu Ser Asp Gly Ala Thr Gly Lys Cys Leu Gly Ser Cys Lys Thr Arg  
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 Phe Arg Leu Cys Leu Lys His Tyr Gln Ala Thr Ile Asp Thr Thr Ser  
 65 70 75 80  
 Gln Cys Thr Tyr Gly Asp Val Ile Thr Pro Ile Leu Gly Glu Asn Ser  
 85 90 95  
 Val Asn Leu Thr Asp Ala Gln Arg Phe Gln Asn Lys Gly Phe Thr Asn  
 100 105 110  
 Pro Ile Gln Phe Pro Phe Ser Phe Ser Trp Pro Gly Thr Phe Ser Leu  
 115 120 125  
 Ile Val Glu Ala Trp His Asp Thr Asn Asn Ser Gly Asn Ala Arg Thr  
 130 135 140  
 Asn Lys Leu Leu Ile Gln Arg Leu Leu Val Gln Gln Val Leu Glu Val  
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 Ser Ser Glu Trp Lys Thr Asn Lys Ser Glu Ser Gln Tyr Thr Ser Leu  
 165 170 175  
 Glu Tyr Asp Phe Arg Val Thr Cys Asp Leu Asn Tyr Tyr Gly Ser Gly  
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 Cys Ala Lys Phe Cys Arg Pro Arg Asp Asp Ser Phe Gly His Ser Thr  
 195 200 205  
 Cys Ser Glu Thr Gly Glu Ile Ile Cys Leu Thr Gly Trp Gln Gly Asp  
 210 215 220  
 Tyr Cys His Ile Pro Lys Cys Ala Lys Gly Cys Glu His Gly His Cys  
 225 230 235 240  
 Asp Lys Pro Asn Gln Cys Val Cys Gln Leu Gly Trp Lys Gly Ala Leu  
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 Cys Asn Glu Cys Val Leu Glu Pro Asn Cys Ile His Gly Thr Cys Asn  
 260 265 270  
 Lys Pro Trp Thr Cys Ile Cys Asn Glu Gly Trp Gly Gly Leu Tyr Cys  
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 Pro Gly Tyr Ser Gly Asp Asp Cys Glu Asn Glu Ile Tyr Ser Cys Asp  
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 Ala Asp Val Asn Pro Cys Gln Asn Gly Gly Thr Cys Ile Asp Glu Pro  
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 His Thr Lys Thr Gly Tyr Lys Cys His Cys Arg Asn Gly Trp Ser Gly  
 355 360 365  
 Lys Met Cys Glu Glu Lys Val Leu Thr Cys Ser Asp Lys Pro Cys His  
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 Gln Gly Ile Cys Arg Asn Val Arg Pro Gly Leu Gly Ser Lys Gly Gln  
 385 390 395 400  
 Gly Tyr Gln Cys Glu Cys Pro Ile Gly Tyr Ser Gly Pro Asn Cys Asp  
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Arg	Cys	Glu	Thr	Asn	Ile	Asp	Asp	Cys	Leu	Gly	His	Gln	Cys	Glu	Asn
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Pro	Gly	Phe	His	Gly	Thr	His	Cys	Ser	Ser	Lys	Val	Asp	Leu	Cys	Leu
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Ile	Arg	Pro	Cys	Ala	Asn	Gly	Gly	Thr	Cys	Leu	Asn	Leu	Asn	Asn	Asp
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Tyr	Gln	Cys	Thr	Cys	Arg	Ala	Gly	Phe	Thr	Gly	Lys	Asp	Cys	Ser	Val
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Met	Asn	Arg	Val	Asn	Ser	Phe	Glu	Cys	Val	Cys	Ala	Asn	Gly	Phe	Arg
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Gly	Lys	Gln	Cys	Asp	Glu	Glu	Ser	Tyr	Asp	Ser	Val	Thr	Phe	Asp	Ala
				565					570					575	
His	Gln	Tyr	Gly	Ala	Thr	Thr	Gln	Ala	Arg	Ala	Asp	Gly	Leu	Ala	Asn
			580					585					590		
Ala	Gln	Val	Val	Leu	Ile	Ala	Val	Phe	Ser	Val	Ala	Met	Pro	Leu	Val
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Ala	Val	Ile	Ala	Ala	Cys	Val	Val	Phe	Cys	Met	Lys	Arg	Lys	Arg	Lys
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Arg	Ala	Gln	Glu	Lys	Asp	Asn	Ala	Glu	Ala	Arg	Lys	Gln	Asn	Glu	Gln
625					630					635					640
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Leu	Ala	Ser	Ala	Ser	Met	Gly	Gly	Lys	Thr	Gly	Ser	Asn	Ser	Gly	Leu
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Thr	Phe	Asp	Gly	Gly	Asn	Pro	Asn	Ile	Ile	Lys	Asn	Thr	Trp	Asp	Lys
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Ser	Val	Asn	Asn	Ile	Cys	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala
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Ala	Ala	Ala	Asp	Glu	Cys	Leu	Met	Tyr	Gly	Gly	Tyr	Val	Ala	Ser	Val
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Ala	Asp	Asn	Asn	Asn	Ala	Asn	Ser	Asp	Phe	Cys	Val	Ala	Pro	Leu	Gln
				725					730					735	
Arg	Ala	Lys	Ser	Gln	Lys	Gln	Leu	Asn	Thr	Asp	Pro	Thr	Leu	Met	His
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Arg	Gly	Ser	Pro	Ala	Gly	Thr	Ser	Ala	Lys	Gly	Ala	Ser	Gly	Gly	Gly
		755					760					765			
Pro	Gly	Ala	Ala	Glu	Gly	Lys	Arg	Ile	Ser	Val	Leu	Gly	Glu	Gly	Ser
	770					775					780				
Tyr	Cys	Ser	Gln	Arg	Trp	Pro	Ser	Leu	Ala	Ala	Ala	Gly	Val	Ala	Gly
785					790					795					800
Asp	Leu	Phe	Ile	Gln	Leu	Met	Ala	Ala	Ala	Ser	Val	Ala	Gly	Thr	Asp
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Arg Cys Ser Ala Gly Trp Ser Gly Glu Asp Cys
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Arg Leu Arg Cys Asp Ile Gly Trp Met Gly Pro His Cys
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 <223> Mouse Delta (M-Delta-1) gene

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Ala	Leu	Ala	Val	Val	Ser	Ala	Leu	Leu	Cys	Gln	Val	Trp	Ser	Ser	Gly	
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gta	ttt	gag	ctg	aag	ctg	cag	gag	ttc	gtc	aac	aag	aag	ggg	ctg	ctg	150
Val	Phe	Glu	Leu	Lys	Leu	Gln	Glu	Phe	Val	Asn	Lys	Lys	Gly	Leu	Leu	
	25				30					35					40	
ggg	aac	cgc	aac	tgc	tgc	cgc	ggg	ggc	tct	ggc	ccg	cct	tgc	gcc	tgc	198
Gly	Asn	Arg	Asn	Cys	Cys	Arg	Gly	Gly	Ser	Gly	Pro	Pro	Cys	Ala	Cys	
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agg	acc	ttc	ttt	cgc	gta	tgc	ctc	aag	cac	tac	cag	gcc	agc	gtg	tca	246
Arg	Thr	Phe	Phe	Arg	Val	Cys	Leu	Lys	His	Tyr	Gln	Ala	Ser	Val	Ser	
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Pro	Glu	Pro	Pro	Cys	Thr	Tyr	Gly	Ser	Ala	Val	Thr	Pro	Val	Leu	Gly	
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gtc	gac	tcc	ttc	agc	ctg	cct	gat	ggc	gca	ggc	atc	gac	ccc	gcc	ttc	342
Val	Asp	Ser	Phe	Ser	Leu	Pro	Asp	Gly	Ala	Gly	Ile	Asp	Pro	Ala	Phe	
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Ser	Asn	Pro	Ile	Arg	Phe	Pro	Phe	Gly	Phe	Thr	Trp	Pro	Gly	Thr	Phe	
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Ser	Leu	Ile	Ile	Glu	Ala	Leu	His	Thr	Asp	Ser	Pro	Asp	Asp	Leu	Ala	
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Thr	Glu	Asn	Pro	Glu	Arg	Leu	Ile	Ser	Arg	Leu	Thr	Thr	Gln	Arg	His	
			140					145					150			
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Leu	Thr	Val	Gly	Glu	Glu	Trp	Ser	Gln	Asp	Leu	His	Ser	Ser	Gly	Arg	
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Thr	Asp	Leu	Arg	Tyr	Ser	Tyr	Arg	Phe	Val	Cys	Asp	Glu	His	Tyr	Tyr	
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gga	gaa	ggc	tgc	tct	gtg	ttc	tgc	cga	cct	cgg	gat	gac	gcc	ttt	ggc	630
Gly	Glu	Gly	Cys	Ser	Val	Phe	Cys	Arg	Pro	Arg	Asp	Asp	Ala	Phe	Gly	
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His	Phe	Thr	Cys	Gly	Asp	Arg	Gly	Glu	Lys	Met	Cys	Asp	Pro	Gly	Trp	
				205					210					215		
aaa	ggc	cag	tac	tgc	act	gac	cca	atc	tgt	ctg	cca	ggg	tgt	gat	gac	726
Lys	Gly	Gln	Tyr	Cys	Thr	Asp	Pro	Ile	Cys	Leu	Pro	Gly	Cys	Asp	Asp	
			220					225					230			
caa	cat	gga	tac	tgt	gac	aaa	cca	ggg	gag	tgc	aag	tgc	aga	gtt	ggc	774
Gln	His	Gly	Tyr	Cys	Asp	Lys	Pro	Gly	Glu	Cys	Lys	Cys	Arg	Val	Gly	

235						240						245						
tgg	cag	ggc	cgc	tac	tgc	gat	gag	tgc	atc	cga	tac	cca	ggc	tgt	gtc			822
Trp	Gln	Gly	Arg	Tyr	Cys	Asp	Glu	Cys	Ile	Arg	Tyr	Pro	Gly	Cys	Val			
	250						255				260							
cat	ggc	acc	tgc	cag	caa	ccc	tgg	cag	tgt	aac	tgc	cag	gaa	ggc	tgg			870
His	Gly	Thr	Cys	Gln	Gln	Pro	Trp	Gln	Cys	Asn	Cys	Gln	Glu	Gly	Trp			
	265				270					275					280			
ggg	ggc	ctt	ttc	tgc	aac	caa	gac	ctg	aac	tac	tgt	act	cac	cat	aag			918
Gly	Gly	Leu	Phe	Cys	Asn	Gln	Asp	Leu	Asn	Tyr	Cys	Thr	His	His	Lys			
				285					290					295				
ccg	tgc	agg	aat	gga	gcc	acc	tgc	acc	aac	acg	ggc	cag	ggg	agc	tac			966
Pro	Cys	Arg	Asn	Gly	Ala	Thr	Cys	Thr	Asn	Thr	Gly	Gln	Gly	Ser	Tyr			
			300					305					310					
aca	tgt	tcc	tgc	cga	cct	ggg	tat	aca	ggt	gcc	aac	tgt	gag	ctg	gaa			1014
Thr	Cys	Ser	Cys	Arg	Pro	Gly	Tyr	Thr	Gly	Ala	Asn	Cys	Glu	Leu	Glu			
		315					320					325						
gta	gat	gag	tgt	gct	cct	agc	ccc	tgc	aag	aac	gga	gcg	agc	tgc	acg			1062
Val	Asp	Glu	Cys	Ala	Pro	Ser	Pro	Cys	Lys	Asn	Gly	Ala	Ser	Cys	Thr			
	330					335					340							
gac	ctt	gag	gac	agc	ttc	tct	tgc	acc	tgc	cct	ccc	ggc	ttc	tat	ggc			1110
Asp	Leu	Glu	Asp	Ser	Phe	Ser	Cys	Thr	Cys	Pro	Pro	Gly	Phe	Tyr	Gly			
	345				350					355					360			
aag	gtc	tgt	gag	ctg	agc	gcc	atg	acc	tgt	gca	gat	ggc	cct	tgc	ttc			1158
Lys	Val	Cys	Glu	Leu	Ser	Ala	Met	Thr	Cys	Ala	Asp	Gly	Pro	Cys	Phe			
				365					370					375				
aat	gga	gga	cga	tgt	tca	gat	aac	cct	gac	gga	ggc	tac	acc	tgc	cat			1206
Asn	Gly	Gly	Arg	Cys	Ser	Asp	Asn	Pro	Asp	Gly	Gly	Tyr	Thr	Cys	His			
			380					385					390					
tgc	ccc	ttg	ggc	ttc	tct	ggc	ttc	aac	tgt	gag	aag	aag	atg	gat	ctc			1254
Cys	Pro	Leu	Gly	Phe	Ser	Gly	Phe	Asn	Cys	Glu	Lys	Lys	Met	Asp	Leu			
		395					400					405						
tgc	ggc	tct	tcc	cct	tgt	tct	aac	ggt	gcc	aag	tgt	gtg	gac	ctc	ggc			1302
Cys	Gly	Ser	Ser	Pro	Cys	Ser	Asn	Gly	Ala	Lys	Cys	Val	Asp	Leu	Gly			
	410					415					420							
aac	tct	tac	ctg	tgc	cgg	tgc	cag	gct	ggc	ttc	tcc	ggg	agg	tac	tgc			1350
Asn	Ser	Tyr	Leu	Cys	Arg	Cys	Gln	Ala	Gly	Phe	Ser	Gly	Arg	Tyr	Cys			
	425				430				435						440			
gag	gac	aat	gtg	gat	gac	tgt	gcc	tcc	tcc	ccg	tgt	gca	aat	ggg	ggc			1398
Glu	Asp	Asn	Val	Asp	Asp	Cys	Ala	Ser	Ser	Pro	Cys	Ala	Asn	Gly	Gly			
				445				450						455				
acc	tgc	cgg	gac	agt	gtg	aac	gac	ttc	tcc	tgt	acc	tgc	cca	cct	ggc			1446
Thr	Cys	Arg	Asp	Ser	Val	Asn	Asp	Phe	Ser	Cys	Thr	Cys	Pro	Pro	Gly			
			460					465					470					
tac	acg	ggc	aag	aac	tgc	agc	gcc	cct	gtc	agc	agg	tgt	gag	cat	gca			1494
Tyr	Thr	Gly	Lys	Asn	Cys	Ser	Ala	Pro	Val	Ser	Arg	Cys	Glu	His	Ala			
		475					480					485						



ccc	tgc	cat	aat	ggg	gcc	acc	tgc	cac	cag	agg	ggc	cag	cgc	tac	atg	1542
Pro	Cys	His	Asn	Gly	Ala	Thr	Cys	His	Gln	Arg	Gly	Gln	Arg	Tyr	Met	
490						495					500					
tgt	gag	tgc	gcc	cag	ggc	tat	ggc	ggc	ccc	aac	tgc	cag	ttt	ctg	ctc	1590
Cys	Glu	Cys	Ala	Gln	Gly	Tyr	Gly	Gly	Pro	Asn	Cys	Gln	Phe	Leu	Leu	
505					510					515					520	
cct	gag	cca	cca	cca	ggg	ccc	atg	gtg	gtg	gac	ctc	agt	gag	agg	cat	1638
Pro	Glu	Pro	Pro	Pro	Gly	Pro	Met	Val	Val	Asp	Leu	Ser	Glu	Arg	His	
				525					530					535		
atg	gag	agc	cag	ggc	ggg	ccc	ttc	ccc	tgg	gtg	gcc	gtg	tgt	gcc	ggg	1686
Met	Glu	Ser	Gln	Gly	Gly	Pro	Phe	Pro	Trp	Val	Ala	Val	Cys	Ala	Gly	
			540					545					550			
gtg	gtg	ctt	gtc	ctc	ctg	ctg	ctg	ctg	ggc	tgt	gct	gct	gtg	gtg	gtc	1734
Val	Val	Leu	Val	Leu	Leu	Leu	Leu	Leu	Gly	Cys	Ala	Ala	Val	Val	Val	
		555						560				565				
tgc	gtc	cgg	ctg	aag	cta	cag	aaa	cac	cag	cct	cca	cct	gaa	ccc	tgt	1782
Cys	Val	Arg	Leu	Lys	Leu	Gln	Lys	His	Gln	Pro	Pro	Pro	Glu	Pro	Cys	
	570					575					580					
ggg	gga	gag	aca	gaa	acc	atg	aac	aac	cta	gcc	aat	tgc	cag	cgc	gag	1830
Gly	Gly	Glu	Thr	Glu	Thr	Met	Asn	Asn	Leu	Ala	Asn	Cys	Gln	Arg	Glu	
585					590					595					600	
aag	gac	gtt	tct	gtt	agc	atc	att	ggg	gct	acc	cag	atc	aag	aac	acc	1878
Lys	Asp	Val	Ser	Val	Ser	Ile	Ile	Gly	Ala	Thr	Gln	Ile	Lys	Asn	Thr	
				605					610					615		
aac	aag	aag	gcg	gac	ttt	cac	ggg	gac	cat	gga	gcc	gag	aag	agc	agc	1926
Asn	Lys	Lys	Ala	Asp	Phe	His	Gly	Asp	His	Gly	Ala	Glu	Lys	Ser	Ser	
			620					625					630			
ttt	aag	gtc	cga	tac	ccc	act	gtg	gac	tat	aac	ctc	gtt	cga	gac	ctc	1974
Phe	Lys	Val	Arg	Tyr	Pro	Thr	Val	Asp	Tyr	Asn	Leu	Val	Arg	Asp	Leu	
		635					640					645				
aag	gga	gat	gaa	gcc	acg	gtc	agg	gat	aca	cac	agc	aaa	cgt	gac	acc	2022
Lys	Gly	Asp	Glu	Ala	Thr	Val	Arg	Asp	Thr	His	Ser	Lys	Arg	Asp	Thr	
	650					655					660					
aag	tgc	cag	tca	cag	agt	ctg	cag	gag	aag	aga	aga	tcg	ccc	caa	cac	2070
Lys	Cys	Gln	Ser	Gln	Ser	Leu	Gln	Glu	Lys	Arg	Arg	Ser	Pro	Gln	His	
665					670					675					680	
tta	ggg	gtg	ggg	aga	ttc	ctg	aca	gaa	aac	agg	cca	gag	tct	gtc	tac	2118
Leu	Gly	Val	Gly	Arg	Phe	Leu	Thr	Glu	Asn	Arg	Pro	Glu	Ser	Val	Tyr	
				685					690					695		
tct	act	tca	aag	gac	acc	aag	tac	cag	tcg	gtg	tat	gtt	ctg	tct	gca	2166
Ser	Thr	Ser	Lys	Asp	Thr	Lys	Tyr	Gln	Ser	Val	Tyr	Val	Leu	Ser	Ala	
			700					705					710			
gaa	aag	gat	gag	tgt	gtt	ata	gcg	act	gag	gtg	taagatggaa	gcgatgtggc	2219			
Glu	Lys	Asp	Glu	Cys	Val	Ile	Ala	Thr	Glu	Val						
		715					720									

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aaaattccca tttctcttaa ataaaattcc aaggatatag ccccgatgaa tgctgctgag 2279
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tgctgctgg ttgttcccat tgcactatgg acagttgctt tgaagagtat atatttaaata 2459
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tatgagccag tctttccttg aactagaaac acaactgcct ttattgtcct ttttgatact 2579
gagatgtgtt tttttttttt cctagacggg aaaaagaaaa cgtgtgttat tttttttggg 2639
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<210> 12
<211> 722
<212> PRT
<213> mouse

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<400> 12
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Cys Gln Val Trp Ser Ser Gly Val Phe Glu Leu Lys Leu Gln Glu Phe
 20      25      30
Val Asn Lys Lys Gly Leu Leu Gly Asn Arg Asn Cys Cys Arg Gly Gly
 35      40      45
Ser Gly Pro Pro Cys Ala Cys Arg Thr Phe Phe Arg Val Cys Leu Lys
 50      55      60
His Tyr Gln Ala Ser Val Ser Pro Glu Pro Pro Cys Thr Tyr Gly Ser
 65      70      75      80
Ala Val Thr Pro Val Leu Gly Val Asp Ser Phe Ser Leu Pro Asp Gly
 85      90      95
Ala Gly Ile Asp Pro Ala Phe Ser Asn Pro Ile Arg Phe Pro Phe Gly
100     105     110
Phe Thr Trp Pro Gly Thr Phe Ser Leu Ile Ile Glu Ala Leu His Thr
115     120     125
Asp Ser Pro Asp Asp Leu Ala Thr Glu Asn Pro Glu Arg Leu Ile Ser
130     135     140
Arg Leu Thr Thr Gln Arg His Leu Thr Val Gly Glu Glu Trp Ser Gln
145     150     155     160
Asp Leu His Ser Ser Gly Arg Thr Asp Leu Arg Tyr Ser Tyr Arg Phe
165     170     175
Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser Val Phe Cys Arg
180     185     190
Pro Arg Asp Asp Ala Phe Gly His Phe Thr Cys Gly Asp Arg Gly Glu
195     200     205
Lys Met Cys Asp Pro Gly Trp Lys Gly Gln Tyr Cys Thr Asp Pro Ile
210     215     220
Cys Leu Pro Gly Cys Asp Asp Gln His Gly Tyr Cys Asp Lys Pro Gly
225     230     235     240
Glu Cys Lys Cys Arg Val Gly Trp Gln Gly Arg Tyr Cys Asp Glu Cys
245     250     255
Ile Arg Tyr Pro Gly Cys Val His Gly Thr Cys Gln Gln Pro Trp Gln
260     265     270
Cys Asn Cys Gln Glu Gly Trp Gly Gly Leu Phe Cys Asn Gln Asp Leu
275     280     285
Asn Tyr Cys Thr His His Lys Pro Cys Arg Asn Gly Ala Thr Cys Thr
290     295     300
Asn Thr Gly Gln Gly Ser Tyr Thr Cys Ser Cys Arg Pro Gly Tyr Thr
305     310     315     320
Gly Ala Asn Cys Glu Leu Glu Val Asp Glu Cys Ala Pro Ser Pro Cys
325     330     335
Lys Asn Gly Ala Ser Cys Thr Asp Leu Glu Asp Ser Phe Ser Cys Thr
340     345     350
Cys Pro Pro Gly Phe Tyr Gly Lys Val Cys Glu Leu Ser Ala Met Thr
355     360     365

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Cys	Ala	Asp	Gly	Pro	Cys	Phe	Asn	Gly	Gly	Arg	Cys	Ser	Asp	Asn	Pro
	370					375					380				
Asp	Gly	Gly	Tyr	Thr	Cys	His	Cys	Pro	Leu	Gly	Phe	Ser	Gly	Phe	Asn
385					390					395					400
Cys	Glu	Lys	Lys	Met	Asp	Leu	Cys	Gly	Ser	Ser	Pro	Cys	Ser	Asn	Gly
				405					410					415	
Ala	Lys	Cys	Val	Asp	Leu	Gly	Asn	Ser	Tyr	Leu	Cys	Arg	Cys	Gln	Ala
			420					425					430		
Gly	Phe	Ser	Gly	Arg	Tyr	Cys	Glu	Asp	Asn	Val	Asp	Asp	Cys	Ala	Ser
		435					440					445			
Ser	Pro	Cys	Ala	Asn	Gly	Gly	Thr	Cys	Arg	Asp	Ser	Val	Asn	Asp	Phe
	450					455					460				
Ser	Cys	Thr	Cys	Pro	Pro	Gly	Tyr	Thr	Gly	Lys	Asn	Cys	Ser	Ala	Pro
465					470					475					480
Val	Ser	Arg	Cys	Glu	His	Ala	Pro	Cys	His	Asn	Gly	Ala	Thr	Cys	His
				485					490					495	
Gln	Arg	Gly	Gln	Arg	Tyr	Met	Cys	Glu	Cys	Ala	Gln	Gly	Tyr	Gly	Gly
			500					505					510		
Pro	Asn	Cys	Gln	Phe	Leu	Leu	Pro	Glu	Pro	Pro	Pro	Gly	Pro	Met	Val
		515					520					525			
Val	Asp	Leu	Ser	Glu	Arg	His	Met	Glu	Ser	Gln	Gly	Gly	Pro	Phe	Pro
	530					535					540				
Trp	Val	Ala	Val	Cys	Ala	Gly	Val	Val	Leu	Val	Leu	Leu	Leu	Leu	Leu
545					550					555					560
Gly	Cys	Ala	Ala	Val	Val	Val	Cys	Val	Arg	Leu	Lys	Leu	Gln	Lys	His
				565					570					575	
Gln	Pro	Pro	Pro	Glu	Pro	Cys	Gly	Gly	Glu	Thr	Glu	Thr	Met	Asn	Asn
			580					585					590		
Leu	Ala	Asn	Cys	Gln	Arg	Glu	Lys	Asp	Val	Ser	Val	Ser	Ile	Ile	Gly
		595					600					605			
Ala	Thr	Gln	Ile	Lys	Asn	Thr	Asn	Lys	Lys	Ala	Asp	Phe	His	Gly	Asp
	610					615					620				
His	Gly	Ala	Glu	Lys	Ser	Ser	Phe	Lys	Val	Arg	Tyr	Pro	Thr	Val	Asp
625					630					635					640
Tyr	Asn	Leu	Val	Arg	Asp	Leu	Lys	Gly	Asp	Glu	Ala	Thr	Val	Arg	Asp
				645					650					655	
Thr	His	Ser	Lys	Arg	Asp	Thr	Lys	Cys	Gln	Ser	Gln	Ser	Leu	Gln	Glu
			660					665					670		
Lys	Arg	Arg	Ser	Pro	Gln	His	Leu	Gly	Val	Gly	Arg	Phe	Leu	Thr	Glu
			675				680					685			
Asn	Arg	Pro	Glu	Ser	Val	Tyr	Ser	Thr	Ser	Lys	Asp	Thr	Lys	Tyr	Gln
	690					695					700				
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Glu	Val														

<210> 13  
 <211> 578  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Consenses sequence of Chick Delta and Mouse Delta

<400> 13  
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 Glu Leu Lys Leu Gln Glu Phe Val Asn Lys Lys Gly Leu Leu Asn Arg  
 20 25 30

Asn	Cys	Cys	Arg	Gly	Gly	Gly	Cys	Cys	Thr	Phe	Phe	Arg	Val	Cys	Leu
		35					40					45			
Lys	His	Tyr	Gln	Ala	Ser	Val	Ser	Pro	Glu	Pro	Pro	Cys	Thr	Tyr	Gly
	50					55					60				
Ser	Ala	Thr	Pro	Val	Leu	Gly	Ser	Phe	Ser	Pro	Asp	Gly	Ala	Gly	Asp
65					70					75					80
Pro	Ala	Phe	Ser	Asn	Pro	Ile	Arg	Phe	Pro	Phe	Gly	Phe	Thr	Trp	Pro
				85					90					95	
Gly	Thr	Phe	Ser	Leu	Ile	Ile	Glu	Ala	Leu	His	Thr	Asp	Ser	Pro	Asp
			100					105					110		
Asp	Leu	Thr	Glu	Asn	Pro	Glu	Arg	Leu	Ile	Ser	Arg	Leu	Thr	Gln	Arg
		115					120					125			
His	Leu	Val	Gly	Glu	Glu	Trp	Ser	Gln	Asp	Leu	His	Ser	Ser	Gly	Arg
	130					135					140				
Thr	Asp	Leu	Tyr	Ser	Tyr	Arg	Phe	Val	Cys	Asp	Glu	His	Tyr	Tyr	Gly
145					150					155					160
Glu	Gly	Cys	Ser	Val	Phe	Cys	Arg	Pro	Arg	Asp	Asp	Phe	Gly	His	Phe
				165					170					175	
Thr	Cys	Gly	Arg	Gly	Glu	Lys	Cys	Pro	Gly	Trp	Lys	Gly	Gln	Tyr	Cys
			180					185					190		
Thr	Pro	Ile	Cys	Leu	Pro	Gly	Cys	Asp	Gln	His	Gly	Cys	Asp	Lys	Pro
		195					200					205			
Gly	Glu	Cys	Lys	Cys	Arg	Val	Gly	Trp	Gln	Gly	Arg	Tyr	Cys	Asp	Glu
	210					215					220				
Cys	Ile	Arg	Tyr	Pro	Gly	Cys	Val	His	Gly	Thr	Cys	Gln	Gln	Pro	Trp
225					230					235					240
Gln	Cys	Asn	Cys	Gln	Glu	Gly	Trp	Gly	Gly	Leu	Phe	Cys	Asn	Gln	Asp
				245					250					255	
Leu	Asn	Tyr	Cys	Thr	His	His	Lys	Pro	Cys	Asn	Gly	Ala	Thr	Cys	Thr
			260					265					270		
Asn	Thr	Gly	Gln	Gly	Ser	Tyr	Thr	Cys	Ser	Cys	Arg	Pro	Gly	Tyr	Thr
		275					280					285			
Gly	Cys	Glu	Glu	Glu	Cys	Pro	Cys	Lys	Asn	Gly	Ser	Cys	Thr	Asp	Leu
	290					295				300					
Glu	Ser	Ser	Cys	Thr	Cys	Pro	Pro	Gly	Phe	Tyr	Gly	Lys	Cys	Glu	Leu
305					310					315					320
Ser	Ala	Met	Thr	Cys	Ala	Asp	Gly	Pro	Cys	Phe	Asn	Gly	Gly	Arg	Cys
				325					330					335	
Asp	Asn	Pro	Asp	Gly	Gly	Tyr	Cys	Cys	Pro	Leu	Gly	Ser	Gly	Phe	Asn
			340					345					350		
Cys	Glu	Lys	Lys	Asp	Cys	Ser	Ser	Pro	Cys	Asn	Gly	Ala	Cys	Val	Asp
		355					360					365			
Leu	Gly	Asn	Ser	Tyr	Cys	Cys	Gln	Ala	Gly	Phe	Gly	Arg	Cys	Asp	Asn
	370					375					380				
Val	Asp	Asp	Cys	Ala	Ser	Pro	Cys	Asn	Gly	Gly	Thr	Cys	Asp	Val	Asn
385					390					395					400
Asp	Ser	Cys	Thr	Cys	Pro	Pro	Gly	Tyr	Gly	Lys	Asn	Cys	Ser	Pro	Val
				405					410					415	
Ser	Arg	Cys	Glu	His	Pro	Cys	His	Asn	Gly	Ala	Thr	Cys	His	Arg	Arg
			420					425					430		
Tyr	Cys	Glu	Cys	Ala	Gly	Tyr	Gly	Gly	Asn	Cys	Gln	Phe	Leu	Leu	Pro
		435					440					445			
Glu	Pro	Pro	Gly	Pro	Val	Asp	Glu	Glu	Gln	Phe	Pro	Trp	Ala	Val	Cys
	450					455					460				
Ala	Gly	Leu	Val	Leu	Leu	Leu	Leu	Gly	Cys	Ala	Ala	Val	Val	Cys	Val
465					470					475					480
Arg	Leu	Lys	Gln	Lys	Pro	Glu	Cys	Glu	Thr	Glu	Thr	Met	Asn	Asn	Leu
				485					490					495	
Ala	Asn	Cys	Gln	Arg	Glu	Lys	Asp	Ser	Ser	Ile	Gly	Ala	Thr	Gln	Ile
			500					505					510		
Lys	Asn	Thr	Asn	Lys	Lys	Asp	Phe	His	Asp	Lys	Lys	Val	Arg	Tyr	Pro

		515					520					525					
Val	Asp	Tyr	Asn	Leu	Val	Leu	Lys	Val	His	Lys	Lys	Cys	Ser	Glu	Glu		
	530					535					540						
Lys	Ala	Leu	Arg	Lys	Arg	Pro	Ser	Val	Tyr	Ser	Thr	Ser	Lys	Asp	Thr		
545					550					555					560		
Lys	Tyr	Gln	Ser	Val	Tyr	Val	Ser	Glu	Lys	Asp	Glu	Cys	Ile	Ala	Thr		
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Glu	Val																

<210> 14  
 <211> 525  
 <212> DNA  
 <213> Homo sapiens

<400> 14  
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 tccgacaaga atggmtttca aggcccgcta ccccgagcgtg gactataact cgtgcaggac 180  
 ctcaaggggtg acgacaccgc cgtcaggacg tcgcacagca agcgtgacac caagtgccag 240  
 tccccaggct cctcagggag gagaaggga ccccgaccac actcaggggk tgcgtgctgc 300  
 gggccgggct caggaggggg tacctggggg gtgtcttctt ggaaccactg ctccgtttct 360  
 cttcccaaat gttctcatgc attcattgtg gattttctct attttccttt tagtggagaa 420  
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<210> 15  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Predicted amino acid sequence of humna delta

<220>  
 <221> VARIANT  
 <222> 4  
 <223> Xaa = Any Amino Acid

<400> 15  
 Tyr Asp Glu Xaa Pro Gly Glu Leu Pro Ala  
 1 5 10

<210> 16  
 <211> 44  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Predicted amino acid sequence of humna delta

<220>  
 <221> VARIANT  
 <222> 11, 15, 23, 24, 28  
 <223> Xaa = Any Amino Acid

<400> 16  
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 1 5 10 15

Pro Thr Arg Arg Arg Thr Xaa Xaa Arg Gly Thr Xaa Ala Ser Asp Lys  
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 Asn Gly Phe Gln Gly Pro Leu Pro Gln Arg Gly Leu  
           35                  40

<210> 17  
 <211> 118  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Predicted amino acid sequence of humna delta

<220>  
 <221> VARIANT  
 <222> 41  
 <223> Xaa = Any Amino Acid

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 Ser Lys Arg Asp Thr Lys Cys Gln Ser Pro Gly Ser Ser Gly Arg Arg  
                   20                  25                  30  
 Arg Gly Pro Arg Pro His Ser Gly Xaa Ala Cys Cys Gly Pro Gly Ser  
                   35                  40                  45  
 Gly Gly Gly Thr Trp Gly Val Ser Ser Trp His Cys Ser Val Ser Leu  
   50                  55                  60  
 Pro Lys Cys Ser His Ala Phe Ile Val Asp Phe Leu Tyr Phe Pro Phe  
  65                  70                  75                  80  
 Ser Gly Glu Ala Ser Glu Arg Lys Arg Pro Asp Ser Gly Cys Ser Thr  
                   85                  90                  95  
 Ser Lys Asp Thr Lys Tyr Gln Ser Val Tyr Val Ile Ser Glu Glu Lys  
                  100                 105                 110  
 Asp Glu Cys Val Ile Ala  
           115

<210> 18  
 <211> 173  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Predicted amino acid sequence of human delta

<220>  
 <221> VARIANT  
 <222> 34, 35, 39, 44, 96  
 <223> Xaa = Any Amino Acid

<400> 18  
 Thr Met Asn Asn Leu Ala Asn Cys Gln Arg Glu Lys Asp Ile Ser Val  
   1                  5                  10                  15  
 Ser Ile Ile Gly Ala Thr Ser Asp Gln Glu His Gln Gln Glu Gly Gly  
                   20                  25                  30  
 Leu Xaa Xaa Gly Gly Pro Xaa Pro Thr Arg Met Xaa Phe Lys Ala Arg  
                   35                  40                  45  
 Tyr Pro Ser Val Asp Tyr Asn Ser Cys Arg Thr Ser Arg Val Thr Thr  
  50                  55                  60  
 Pro Pro Ser Gly Arg Arg Thr Ala Ser Val Thr Pro Ser Ala Ser Pro



65					70					75					80
Gln	Ala	Pro	Gln	Gly	Gly	Glu	Gly	Asp	Pro	Asp	His	Thr	Gln	Gly	Xaa
				85					90					95	
Arg	Ala	Ala	Gly	Arg	Ala	Gln	Glu	Gly	Val	Pro	Gly	Gly	Cys	Leu	Pro
			100					105					110		
Gly	Thr	Thr	Ala	Pro	Phe	Leu	Phe	Pro	Asn	Val	Leu	Met	His	Ser	Leu
		115					120					125			
Trp	Ile	Phe	Ser	Ile	Phe	Leu	Leu	Val	Glu	Lys	His	Leu	Lys	Glu	Lys
	130					135					140				
Gly	Arg	Thr	Arg	Ala	Val	Gln	Leu	Gln	Lys	Thr	Pro	Ser	Thr	Ser	Arg
145					150					155					160
Cys	Thr	Ser	Tyr	Pro	Arg	Arg	Arg	Thr	Ser	Ala	Ser	Ser			
				165				170							

<210> 19  
 <211> 60  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Predicted amino acid sequence of human delta

<220>  
 <221> VARIANT  
 <222> 1, 19, 23, 32, 33, 36, 43  
 <223> Xaa = Any Amino Acid

<400> 19
Xaa Thr Trp Arg Thr Ala Ser Val Arg Arg Thr Ser Gln Ser Ala Ser
1 5 10 15
Ser Gly Xaa Arg Gln Ile Xaa Asn Thr Asn Lys Lys Ala Asp Phe Xaa
20 25 30
Xaa Gly Asp Xaa Ser Val Arg Gln Glu Trp Xaa Ser Arg Pro Ala Thr
35 40 45
Pro Ala Trp Thr Ile Thr Arg Ala Gly Pro Gln Gly
50 55 60

<210> 20  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Predicted amino acid sequence of human delta

<400> 20  
 Arg His Arg Arg Gln Asp Val Ala Gln Gln Ala  
 1 5 10

<210> 21  
 <211> 61  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Predicted amino acid sequence of human delta

<400> 21

His	Gln	Val	Pro	Val	Pro	Arg	Leu	Leu	Arg	Glu	Glu	Lys	Gly	Thr	Pro
1				5					10					15	
Thr	Thr	Leu	Arg	Gly	Cys	Val	Leu	Arg	Ala	Gly	Leu	Arg	Arg	Gly	Tyr
			20					25					30		
Leu	Gly	Gly	Val	Phe	Leu	Glu	Pro	Leu	Leu	Arg	Phe	Ser	Ser	Gln	Met
		35					40					45			
Phe	Ser	Cys	Ile	His	Cys	Gly	Phe	Ser	Leu	Phe	Ser	Phe			
	50					55					60				

<210> 22  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Predicted amino acid sequence of human delta

Lys	Lys	Lys	Ala	Gly	Leu	Gly	Leu	Phe	Asn	Phe	Lys	Lys	Arg	His	Gln
1				5					10					15	
Val	Pro	Val	Gly	Val	Arg	His	Ile	Arg	Gly	Glu	Gly	Arg	Val	Arg	His
			20					25					30		
Arg															

<210> 23  
 <211> 175  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Predicted amino acid sequence of human delta

<220>  
 <221> VARIANT  
 <222> 25, 34, 35, 38, 97  
 <223> Xaa = Any Amino Acid

Thr	Met	Asn	Asn	Leu	Ala	Asn	Cys	Gln	Arg	Glu	Lys	Asp	Ile	Ser	Val
1				5					10					15	
Ser	Ile	Ile	Gly	Ala	Thr	Gly	Ile	Xaa	Asn	Thr	Asn	Lys	Lys	Ala	Asp
			20					25					30		
Phe	Xaa	Xaa	Gly	Asp	Xaa	Ser	Ser	Asp	Lys	Asn	Gly	Phe	Gln	Lys	Ala
		35					40					45			
Arg	Tyr	Pro	Ser	Val	Asp	Tyr	Asn	Leu	Val	Gln	Asp	Leu	Lys	Gly	Asp
	50					55					60				
Asp	Thr	Ala	Val	Arg	Thr	Ser	His	Ser	Lys	Arg	Asp	Thr	Lys	Cys	Gln
65					70					75				80	
Ser	Pro	Gly	Ser	Ser	Gly	Arg	Arg	Arg	Gly	Pro	Arg	Pro	His	Ser	Gly
				85					90					95	
Xaa	Ala	Cys	Cys	Gly	Pro	Gly	Ser	Gly	Gly	Gly	Thr	Trp	Gly	Val	Ser
			100					105					110		
Ser	Trp	Asn	His	Cys	Ser	Val	Ser	Leu	Pro	Lys	Cys	Ser	His	Ala	Phe
		115					120					125			
Ile	Val	Asp	Phe	Leu	Tyr	Phe	Pro	Phe	Ser	Gly	Glu	Ala	Ser	Glu	Arg
	130					135					140				
Lys	Arg	Pro	Asp	Ser	Gly	Cys	Ser	Thr	Ser	Lys	Asp	Thr	Lys	Tyr	Gln
145					150					155					160

Ser Val Tyr Val Ile Ser Glu Glu Lys Asp Glu Cys Val Ile Ala  
165 170 175

<210> 24  
<211> 2899  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Consenses sequence of mouse delta and human delta

<220>  
<221> misc\_feature  
<222> 854, 973, 984, 1582, 1787, 1819, 1864, 1916, 1951, 2033,  
2152, 2156, 2171, 2183, 2194, 2212, 2220, 2226, 2230, 2244,  
2245, 2264, 2265, 2266, 2287  
<223> n = A,T,C or G

<400> 24  
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ggggctgctg gggaaccgca actgctgccc cgggggctct ggcccgcctt gcgcctgcag 180  
gaccttcttt cgcgtatgcc tcaaccacta ccaggccagc gtgtcaccgg agccaccctg 240  
cacctacggc agtgctgtca cgccagtgtc ggggtctcgac tccttcagcc tgcctsatkg 300  
sgyasgsryc smccycgagg yckwcrgyaw csmyaagyyy gatatcgmm ytycggcttca 360  
cctggccrgrg yaccttctct ctgatyattg aagcyctcca yacagaytct ccygatgacc 420  
tcgcaacaga aaaccacagaa agactcatca gccgcctgrc cacycagagg cacctsackg 480  
tgggmrgarga rtggtcycag gacckkcaca gyagcggccg cacrgacctc mrgtactcyt 540  
accgsttygt gtgtgacgar cactactacg gagarggytg ctctgtkktc tgccgwccyc 600  
gggagaygagc cttyggccac ttcacctgyg gggasmgwgg ggagaarrtg tgcraacctg 660  
gctggaaagg scmgtactgc acwgascera tctgyctgcc wggrrtgtat gascarcattg 720  
gatwytgtga caaaccaggg gartgcaagt gcagagtkgg ctggcagggc cgstactgyg 780  
atgagtgyat ccgytaycca ggytgtctcc atggcacctg ccagcarccc tggcagtgya 840  
actgccagga aggntggggg ggccttttct gcaaccarga cctgaactac tgyacwcacc 900  
ataagccstg cargaatgga gccacctgca acmaacacgg gccaggggga gctacacwtg 960  
ktcyttggcc ggncykgggt ayanagggtg ccamctgyga agcttgggra ktrgaygagt 1020  
tggtgmyccy agcccytggy aagaacggag sgagctksac ggaycttcgg agracagctw 1080  
ctcytgaycc tgcccwcccg gcttctaygg caarrtctgt garytgagyg ccatgacctg 1140  
tgcrgayggc ccttgcttya ayggrrggwg rtgytcagay arcccygayg gaggstacas 1200  
ctgccrytgc cckctgggct wctcyggctt caactgtgag aagaaratkg ayywctgcr 1260  
ctcttcmccy tggttctaayg gtgccaagtg tgtggacctc ggyraykcyt acctgtgccg 1320  
stgccaggcy ggcttctcsg ggaggyactg ygasgacaay gtggaygact gygcctcctc 1380  
cccgtgygcm aaygggggga cctgccggga yrgygtgaac gacttgtcct gyacctgccc 1440  
rcctggctac acgggcarga actgcagygc cccygycagc aggtgygagc aygcaccctg 1500  
ccayaatggg gccacctgcc acsagagggg ccascgctay wtgtgygagt gygcccrrrg 1560  
ctayggsggy cccaactgcc anttyctgct cccygaarcy gmccmccmgg scgaygggtg 1620  
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tgtgygcccg ggtsrtstct gtcctcmctg tgcgtgctgg ctgtgcygct gtggtggtct 1740  
gcgtccggct gargctracg aarcaccrgc cyccascyga mcccetgnsg ggrgagacrg 1800  
araccatgaa caacctrngc aaytgccagc gygagaagga crtytcwgt yagcatcaty 1860  
gggnyacsca catcaagaac accaacaaga aggcggactt ycacggggac cayrgngccr 1920  
asaagaryrg cttyaaggyc cgmtacccmr nkgtggacta taacctcgk crrgacctca 1980  
aggwgayga mrccrcsgtc agggayrcrc acagcaarcg tgacaccaag tgnacagycmc 2040  
agrgctcykg aggrgargag aaggggaycs ccgaccmaca ctyagggggg ggaggaagmw 2100  
tcytgamaga aaaaggccrg astyygggyy trytcwact tcaaargaca ancmangtac 2160  
magtcggtgt nygtymtktc ygnagragga aggntgastg ygtyataggm rnytgaggtn 2220  
gtaarntggn agcgatgtgg caanntccc atttctcksa aaknnnattc cmmggatata 2280  
gcycgntga atgctkctga gagaggaagg gagaggaaac ccagggactg ytkytcagaa 2340  
ccaggttcag gcgaagctgg ttctctcaga gttagcagag gcgcccagca ctgccagcct 2400  
aggctttggc tgccgctgga ctgcctgctg gttgttccca ttgcactatg gacagttgct 2460

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ttgaagagta tatattttaa tggacgagtg acttgattca tatacgaagc acgcactgcc 2520
cacacgtcta tcttggatta ctatgagcca gtcttttcctt gaactagaaa cacaactgcc 2580
tttattgtcc tttttgatac tgagatgtgt tttttttttt cctagacggg aaaaagaaaa 2640
cgtgtgttat ttttttggga tttgtaaaaa tatttttcat gatattctgta aagcttgagt 2700
atthttgtgac gttcattttt ttataattta aatttttggt aatatgtaca aaggcacttc 2760
gggtctatgt gactatattht ttttgtatat aaatgtattt atggaatatt gtgcaaattg 2820
tatttgagtt ttttactgtt ttgttaatga agaaattcat tttaaaaata tttttccaaa 2880
ataaatataa tgaactaca 2899

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<210> 25

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> sequence encoded by SEQ ID NO. 93 (degenerated  
oligo)

<400> 25

Glu Lys Asp Glu Cys Val Ile Ala  
1 5

<210> 26

<211> 1981

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> 559, 678, 689, 1287, 1492, 1524, 1569, 1621, 1656, 1738,  
1857, 1861, 1876, 1888, 1899, 1917, 1925, 1931, 1935, 1942,  
1943, 1952, 1953, 1954, 1968

<223> n = A,T,C or G

<400> 26

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cattgggtac gggccccctt cgagggtcgac ggtatcgata agcttgatat cgaattccgg 60
cttcacctgg ccgggcacct tctctctgat tattgaagct ctccacacag attctcctga 120
tgacctcgca acagaaaacc cagaaagact catcagccgc ctggccaccc agaggcacct 180
gacggtgggc gaggagtggc cccaggacct gcacagcagc ggccgcacgg acctcaagta 240
ctcctaccgc ttcgtgtgtg acgaacacta ctacggagag ggctgctccg ttttctgccc 300
tccccgggac gatgccttcg gccacttcac ctgtggggag cgtggggaga aagtgtgcaa 360
ccctggctgg aaagggccct actgcacaga gccgatctgc ctgcctggat gtgatgagca 420
gcatggattt tgtgacaaac caggggaatg caagtgcaga gtgggctggc agggccggta 480
ctgtgacgag tgtatccgct atccaggctg tctccatggc acctgccagc agccctggca 540
gtgcaactgc caggaaggnt gggggggcct tttctgcaac caggacctga actactgcac 600
acaccataag ccctgcaaga atggagccac ctgcaacaaa cacgggccag ggggagctac 660
acttggctct tggccggnc tgggtacana ggggtgccacc tgcgaagctt ggggattgga 720
cgagttgttg accccagccc ttggtaagaa cggaggggagc ttgacggatc ttcggagaac 780
agctactcct gtacctgccc acccggttc tacggcaaaa tctgtgaatt gagggccatg 840
acctgtgcgg acggcccttg ctttaacggg ggtcgggtgct cagacagccc cgatggaggg 900

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tacagctgcc gctgccccgt gggctactcc ggcttcaact gtgagaagaa aattgactac 960
tgcagctctt caccctgttc taatggtgcc aagtgtgtgg acctcggtga tgcctacctg 1020
tgccgctgcc aggccggctt ctccggggagg cactgtgacg acaacgtgga cgactgcgcc 1080
tcctccccgt gcgccaacgg gggcacctgc cgggatggcg tgaacgactt ctctgcacc 1140
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ccctgccaca atggggccac ctgccacgag aggggccacc gctatttgtg cgagtgtgcc 1260
cgaagctacg ggggtcccaa ctgccanttc ctgctccccg aaactgcccc cccggcccca 1320
cggtggtgga aactccccta aaaaaacctt aaagggccgg ggggggcccc tccccttggt 1380
ggacgtgtgc gccgggggtca tcttgtcct catgctgctg ctgggctgtg ccgctgtggt 1440

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ggctctgcgtc cggctgagggc tgcagaagca ccggccccca gccgaccctt gncgggggga 1500
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catcggggnc acgcagatca agaacaccaa caagaaggcg gacttccacg gggaccacag 1620
ngccgacaag aatggcttca aggcccgcta ccagnggtg gactataacc tcgtgcagga 1680
cctcaagggt gacgacaccg ccgtcaggga cgcgcacagc aagcgtgaca ccaagtgnca 1740
gccccagggc tcctcagggg aggagaaggg gacccccgac ccacactcag ggggtggagg 1800
aagcatcttg aaagaaaaag gccggacttc gggcttggtt aactttcaaa agacaancaa 1860
ngtacaagtc ggtgtncgtc atttccgnag gaggaaggnt gactgcgtca taggaanttg 1920
aggtngtaaa ntggnagttg annttggaag gnnntccccg gattccgntt tcaaagtttt 1980
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<210> 27  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

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<400> 27
His Trp Val Arg Ala Pro Leu Glu Val Asp Gly Ile Asp Lys Leu Asp
 1             5             10             15
Ile Glu Phe Arg Leu His Leu Ala Gly His Leu Leu Ser Asp Tyr
          20             25             30

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<210> 28  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

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<400> 28
Ser Ser Pro His Arg Phe Ser
 1             5

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<210> 29  
 <211> 45  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

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<400> 29
Pro Arg Asn Arg Lys Pro Arg Lys Thr His Gln Pro Pro Gly His Pro
 1             5             10             15
Glu Ala Pro Asp Gly Gly Arg Gly Val Val Pro Gly Pro Ala Gln Gln
          20             25             30
Arg Pro His Gly Pro Gln Val Leu Leu Pro Leu Arg Val
          35             40             45

```

<210> 30  
 <211> 49

<212> PRT  
<213> Artificial Sequence

<220>

<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 30

Arg	Thr	Leu	Leu	Arg	Arg	Gly	Leu	Leu	Arg	Phe	Pro	Ser	Pro	Gly	Arg
1				5					10					15	
Cys	Leu	Arg	Pro	Leu	His	Leu	Trp	Gly	Ala	Trp	Gly	Glu	Ser	Val	Gln
			20					25					30		
Pro	Trp	Leu	Glu	Arg	Ala	Leu	Leu	His	Arg	Ala	Asp	Leu	Pro	Ala	Trp
		35					40					45			

Met

<210> 31

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 31

Ala	Ala	Trp	Ile	Leu
1				5

<210> 32

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 32

Gln	Thr	Arg	Gly	Met	Gln	Val	Gln	Ser	Gly	Leu	Ala	Gly	Pro	Val	Leu
1				5					10					15	

<210> 33

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<220>

<221> VARIANT

<222> 25

<223> Xaa = Any Amino Acid

<400> 33



Arg	Val	Tyr	Pro	Leu	Ser	Arg	Leu	Ser	Pro	Trp	His	Leu	Pro	Ala	Ala
1				5					10					15	
Leu	Ala	Val	Gln	Leu	Pro	Gly	Arg	Xaa	Gly	Gly	Pro	Phe	Leu	Gln	Pro
			20					25					30		
Gly	Pro	Glu	Leu	Leu	His	Thr	Pro								
		35					40								

<210> 34  
 <211> 45  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 27  
 <223> Xaa = Any Amino Acid

Ala	Leu	Gln	Glu	Trp	Ser	His	Leu	Gln	Gln	Thr	Arg	Ala	Arg	Gly	Ser
1				5					10					15	
Tyr	Thr	Trp	Ser	Leu	Ala	Gly	Leu	Gly	Tyr	Xaa	Gly	Cys	His	Leu	Arg
			20					25					30		
Ser	Leu	Gly	Ile	Gly	Arg	Val	Val	Asp	Pro	Ser	Pro	Trp			
		35					40					45			

<210> 35  
 <211> 196  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 166, 179  
 <223> Xaa = Any Amino Acid

Glu	Arg	Arg	Glu	Leu	Asp	Gly	Ser	Ser	Glu	Asn	Ser	Tyr	Ser	Cys	Thr
1				5					10					15	
Cys	Pro	Pro	Gly	Phe	Tyr	Gly	Lys	Ile	Cys	Glu	Leu	Ser	Ala	Met	Thr
			20					25					30		
Cys	Ala	Asp	Gly	Pro	Cys	Phe	Asn	Gly	Gly	Arg	Cys	Ser	Asp	Pro	Asp
		35					40					45			
Gly	Gly	Tyr	Ser	Cys	Arg	Cys	Pro	Val	Gly	Tyr	Ser	Gly	Phe	Asn	Cys
	50					55					60				
Glu	Lys	Lys	Ile	Asp	Tyr	Cys	Ser	Ser	Ser	Pro	Cys	Ser	Asn	Gly	Ala
65				70						75				80	
Lys	Cys	Val	Asp	Leu	Gly	Asp	Ala	Tyr	Leu	Cys	Arg	Gly	Gln	Ala	Gly
			85					90					95		
Phe	Ser	Gly	Arg	His	Cys	Asp	Asp	Asn	Val	Asp	Asp	Cys	Ala	Ser	Ser
			100					105					110		
Pro	Cys	Ala	Asn	Gly	Gly	Thr	Cys	Arg	Asp	Gly	Val	Asn	Asp	Phe	Ser

		115					120					125				
Cys	Thr	Cys	Pro	Pro	Gly	Tyr	Thr	Gly	Arg	Asn	Cys	Ser	Ala	Pro	Ala	
	130					135					140					
Ser	Arg	Cys	Glu	His	Ala	Pro	Cys	His	Asn	Gly	Ala	Thr	Cys	His	Glu	
145					150					155					160	
Arg	Gly	His	Arg	Tyr	Xaa	Cys	Glu	Cys	Ala	Arg	Ser	Tyr	Gly	Gly	Pro	
				165					170					175		
Asn	Cys	Xaa	Phe	Leu	Leu	Pro	Glu	Thr	Ala	Pro	Pro	Ala	Pro	Arg	Trp	
			180					185					190			
Trp	Lys	Leu	Pro													
		195														

<210> 36  
 <211> 65  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 51  
 <223> Xaa = Any Amino Acid

<400>	36															
Lys	Asn	Leu	Lys	Gly	Pro	Gly	Gly	Ala	His	Pro	Leu	Gly	Gly	Arg	Val	
1				5				10						15		
Arg	Arg	Gly	His	Pro	Cys	Pro	His	Ala	Ala	Ala	Gly	Leu	Cys	Arg	Cys	
			20					25					30			
Gly	Gly	Leu	Arg	Pro	Ala	Glu	Ala	Ala	Glu	Ala	Pro	Ala	Pro	Ser	Arg	
		35				40					45					
Pro	Leu	Xaa	Gly	Gly	Asp	Gly	Asp	His	Glu	Gln	Pro	Gly	Gln	Leu	Pro	
	50					55					60					
Ala																
65																

<210> 37  
 <211> 42  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 28, 39  
 <223> Xaa = Any Amino Acid

<400>	37															
Glu	Gly	His	Leu	Ser	Gln	His	His	Arg	Gly	His	Ala	Asp	Gln	Glu	His	
1				5					10					15		
Gln	Gln	Glu	Gly	Gly	Leu	Pro	Arg	Gly	Pro	Gln	Xaa	Arg	Gln	Glu	Trp	
		20						25					30			
Leu	Gln	Gly	Pro	Leu	Pro	Xaa	Gly	Gly	Leu							
		35					40									

<210> 38  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<400> 38  
 Pro Arg Ala Gly Pro Gln Gly  
 1 5

<210> 39  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<400> 39  
 Arg His Arg Arg Gln Gly Arg Ala Gln Gln Ala  
 1 5 10

<210> 40  
 <211> 57  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 4, 43, 45, 50, 54  
 <223> Xaa = Any Amino Acid

<400> 40  
 His Gln Val Xaa Ala Pro Gly Leu Leu Arg Gly Gly Glu Gly Asp Pro  
 1 5 10 15  
 Arg Pro Thr Leu Arg Gly Trp Arg Lys His Leu Glu Arg Lys Arg Pro  
 20 25 30  
 Asp Phe Gly Leu Val Gln Leu Ser Lys Asp Xaa Gln Xaa Thr Ser Arg  
 35 40 45  
 Cys Xaa Ser Phe Pro Xaa Glu Glu Gly  
 50 55

<210> 41  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 5, 8  
 <223> Xaa = Any Amino Acid

<400> 41  
 Leu Arg His Arg Xaa Leu Arg Xaa  
 1 5

<210> 42  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 1, 4, 5  
 <223> Xaa = Any Amino Acid

<400> 42  
 Xaa Trp Lys Xaa Xaa Pro Gly Phe Arg Phe Gln Ser Phe  
 1 5 10

<210> 43  
 <211> 276  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 226, 230  
 <223> Xaa = Any Amino Acid

<400> 43  
 Ile Gly Tyr Gly Pro Pro Ser Arg Ser Thr Val Ser Ile Ser Leu Ile  
 1 5 10 15  
 Ser Asn Ser Gly Phe Thr Trp Pro Gly Thr Phe Ser Leu Ile Ile Glu  
 20 25 30  
 Ala Leu His Thr Asp Ser Pro Asp Asp Leu Ala Thr Glu Asn Pro Glu  
 35 40 45  
 Arg Leu Ile Ser Arg Leu Ala Thr Gln Arg His Leu Thr Val Gly Glu  
 50 55 60  
 Glu Trp Ser Gln Asp Leu His Ser Ser Gly Arg Thr Asp Leu Lys Tyr  
 65 70 75 80  
 Ser Tyr Arg Phe Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser

				85					90					95			
Val	Phe	Cys	Arg	Pro	Arg	Asp	Asp	Ala	Phe	Gly	His	Phe	Thr	Cys	Gly		
			100					105					110				
Glu	Arg	Gly	Glu	Lys	Val	Cys	Asn	Pro	Gly	Trp	Lys	Gly	Pro	Tyr	Cys		
		115					120					125					
Thr	Glu	Pro	Ile	Cys	Leu	Pro	Gly	Cys	Asp	Glu	Gln	His	Gly	Phe	Cys		
	130					135					140						
Asp	Lys	Pro	Gly	Glu	Cys	Lys	Cys	Arg	Val	Gly	Trp	Gln	Gly	Arg	Tyr		
145					150					155					160		
Cys	Asp	Glu	Cys	Ile	Arg	Tyr	Pro	Gly	Cys	Leu	His	Gly	Thr	Cys	Gln		
			165					170						175			
Gln	Pro	Trp	Gln	Cys	Asn	Cys	Gln	Glu	Gly	Trp	Gly	Gly	Leu	Phe	Cys		
			180				185						190				
Asn	Gln	Asp	Leu	Asn	Tyr	Cys	Thr	His	His	Lys	Pro	Cys	Lys	Asn	Gly		
		195					200					205					
Ala	Thr	Cys	Asn	Lys	His	Gly	Pro	Gly	Gly	Ala	Thr	Leu	Gly	Leu	Trp		
	210					215				220							
Pro	Xaa	Trp	Gly	Thr	Xaa	Gly	Ala	Thr	Cys	Glu	Ala	Trp	Gly	Leu	Asp		
225					230					235					240		
Glu	Leu	Leu	Thr	Pro	Ala	Leu	Gly	Lys	Asn	Gly	Gly	Ser	Leu	Thr	Asp		
			245				250							255			
Leu	Arg	Arg	Thr	Ala	Thr	Pro	Val	Pro	Ala	His	Pro	Ala	Ser	Thr	Ala		
			260				265						270				
Lys	Ser	Val	Asn														
		275															

<210> 44  
 <211> 93  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three possible ORF of human Delta contigs

<400>	44																
Pro	Val	Arg	Thr	Ala	Leu	Ala	Leu	Thr	Gly	Val	Gly	Ala	Gln	Thr	Ala		
1				5					10					15			
Pro	Met	Glu	Gly	Thr	Ala	Ala	Ala	Ala	Pro	Trp	Ala	Thr	Pro	Ala	Ser		
		20						25					30				
Thr	Val	Arg	Arg	Lys	Leu	Thr	Thr	Ala	Ala	Leu	His	Pro	Val	Leu	Met		
		35					40					45					
Val	Pro	Ser	Val	Trp	Thr	Ser	Val	Met	Pro	Thr	Cys	Ala	Ala	Ala	Arg		
	50					55					60						
Pro	Ala	Ser	Arg	Gly	Gly	Thr	Val	Thr	Thr	Thr	Trp	Thr	Thr	Ala	Pro		
65				70					75						80		
Pro	Pro	Arg	Ala	Pro	Thr	Gly	Ala	Pro	Ala	Gly	Met	Ala					
			85					90									

<210> 45  
 <211> 74  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 55  
 <223> Xaa = Any Amino Acid

<400> 45  
 Thr Thr Ser Pro Ala Pro Ala Arg Leu Ala Thr Arg Ala Gly Thr Ala  
 1 5 10 15  
 Val Pro Pro Pro Ala Gly Ala Ser Thr His Pro Ala Thr Met Gly Pro  
 20 25 30  
 Pro Ala Thr Arg Gly Ala Thr Ala Ile Cys Ala Ser Val Pro Glu Ala  
 35 40 45  
 Thr Gly Val Pro Thr Ala Xaa Ser Cys Pro Lys Leu Pro Pro Arg Pro  
 50 55 60  
 His Gly Gly Gly Asn Ser Pro Lys Lys Thr  
 65 70

<210> 46  
 <211> 187  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 47, 58, 73, 101, 128, 167, 168, 181, 187  
 <223> Xaa = Any Amino Acid

<400> 46  
 Lys Gly Arg Gly Gly Pro Ile Pro Leu Val Asp Val Cys Ala Gly Val  
 1 5 10 15  
 Ile Leu Val Leu Met Leu Leu Leu Gly Cys Ala Ala Val Val Cys  
 20 25 30  
 Val Arg Leu Arg Leu Gln Lys His Arg Pro Pro Ala Asp Pro Xaa Arg  
 35 40 45  
 Gly Glu Thr Glu Thr Met Asn Asn Leu Xaa Asn Cys Gln Arg Glu Lys  
 50 55 60  
 Asp Ile Ser Val Ser Ile Ile Gly Xaa Thr Gln Ile Lys Asn Thr Asn  
 65 70 75 80  
 Lys Lys Ala Asp Phe His Gly Asp His Ala Asp Lys Asn Gly Phe Lys  
 85 90 95  
 Ala Arg Tyr Pro Xaa Val Asp Tyr Asn Leu Val Gln Asp Leu Lys Gly  
 100 105 110  
 Asp Asp Thr Ala Val Arg Asp Ala His Ser Lys Arg Asp Thr Lys Xaa  
 115 120 125  
 Gln Pro Gln Gly Ser Ser Gly Glu Glu Gly Thr Pro Asp Pro His Ser  
 130 135 140  
 Gly Gly Gly Gly Ser Ile Leu Lys Glu Lys Gly Arg Thr Ser Gly Leu  
 145 150 155 160  
 Phe Asn Phe Gln Lys Thr Xaa Xaa Val Gln Val Gly Val Arg His Phe  
 165 170 175  
 Arg Arg Arg Lys Xaa Asp Cys Val Ile Gly Xaa  
 180 185

<210> 47  
 <211> 20



<212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Deduced amino acid sequence using the three  
       possible ORF of human Delta contigs  
  
 <220>  
 <221> VARIANT  
 <222> 2, 4, 5, 7, 8, 11, 16  
 <223> Xaa = Any Amino Acid  
  
 <400> 47  
 Gly Xaa Lys Xaa Xaa Val Xaa Xaa Gly Lys Xaa Ser Pro Asp Ser Xaa  
   1                  5                  10                  15  
 Phe Lys Val Phe  
           20  
  
 <210> 48  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Deduced amino acid sequence using the three  
       possible ORF of human Delta contigs  
  
 <400> 48  
 Leu Gly Thr Gly Pro Pro Arg Gly Arg Arg Tyr Arg  
   1                  5                  10  
  
 <210> 49  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Deduced amino acid sequence using the three  
       possible ORF of human Delta contigs  
  
 <400> 49  
 Tyr Arg Ile Pro Ala Ser Pro Gly Arg Ala Pro Ser Leu  
   1                  5                  10  
  
 <210> 50  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Deduced amino acid sequence using the three  
       possible ORF of human Delta contigs  
  
 <400> 50  
 Leu Leu Lys Leu Ser Thr Gln Ile Leu Leu Met Thr Ser Gln Gln Lys  
   1                  5                  10                  15  
 Thr Gln Lys Asp Ser Ser Ala Ala Trp Pro Pro Arg Gly Thr

20

25

30

<210> 51  
 <211> 135  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 126  
 <223> Xaa = Any Amino Acid

<400> 51  
 Arg Trp Ala Arg Ser Gly Pro Arg Thr Cys Thr Ala Ala Ala Ala Arg  
 1 5 10 15  
 Thr Ser Ser Thr Pro Thr Ala Ser Cys Val Thr Asn Thr Thr Thr Glu  
 20 25 30  
 Arg Ala Ala Pro Phe Ser Ala Val Pro Gly Thr Met Pro Ser Ala Thr  
 35 40 45  
 Ser Pro Val Cys Ser Val Gly Arg Lys Cys Ala Thr Leu Ala Gly Lys  
 50 55 60  
 Gly Pro Thr Ala Gln Ser Arg Ser Ala Cys Leu Asp Val Met Ser Ser  
 65 70 75 80  
 Met Asp Phe Phe Val Thr Asn Gln Asn Ala Ser Ala Glu Trp Ala Gly  
 85 90 95  
 Arg Ala Gly Thr Val Thr Ser Val Ser Ala Ile Gln Ala Val Ser Met  
 100 105 110  
 Ala Pro Ala Ser Ser Pro Gly Ser Ala Thr Ala Arg Lys Xaa Gly Gly  
 115 120 125  
 Ala Phe Ser Ala Thr Arg Thr  
 130 135

<210> 52  
 <211> 46  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three  
 possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 30, 33  
 <223> Xaa = Any Amino Acid

<400> 52  
 Thr Thr Ala His Thr Ile Ser Pro Ala Arg Met Glu Pro Pro Ala Thr  
 1 5 10 15  
 Asn Thr Gly Gln Gly Glu Leu His Leu Val Phe Gly Arg Xaa Gly Val  
 20 25 30  
 Xaa Arg Val Pro Pro Ala Lys Leu Gly Asp Trp Thr Ser Cys  
 35 40 45

<210> 53  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 53  
Pro Gln Pro Leu Val Arg Thr Glu Gln Glu  
1 5 10

<210> 54  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 54  
Arg Ile Phe Gly Glu Gln Leu Leu Leu Tyr Leu Pro Thr Arg Leu Leu  
1 5 10 15  
Arg Gln Asn Leu  
20

<210> 55  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 55  
Ile Glu Cys His Asp Leu Cys Gly Arg Pro Leu Leu  
1 5 10

<210> 56  
<211> 25  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 56  
Arg Gly Ser Val Leu Arg Gln Pro Arg Trp Arg Val Gln Leu Pro Leu  
1 5 10 15  
Pro Arg Gly Leu Leu Arg Leu Gln Leu  
20 25

<210> 57

<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 57  
Leu Leu Gln Leu Phe Thr Leu Phe  
1 5

<210> 58  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 58  
Trp Cys Gln Val Cys Gly Pro Arg  
1 5

<210> 59  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<400> 59  
Cys Leu Pro Val Pro Leu Pro Gly Arg Leu Leu Gly Glu Ala Leu  
1 5 10 15

<210> 60  
<211> 131  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<220>  
<221> VARIANT  
<222> 76  
<223> Xaa = Any Amino Acid

<400> 60  
Arg Gln Arg Gly Arg Leu Arg Leu Leu Pro Val Arg Gln Gly His Leu  
1 5 10 15  
Pro Gly Trp Arg Glu Arg Leu Leu Leu His Leu Pro Ala Trp Leu His  
20 25 30  
Gly Gln Glu Leu Gln Cys Pro Arg Gln Gln Val Arg Ala Arg Thr Leu

		35					40				45					
Pro	Gln	Trp	Gly	His	Leu	Pro	Arg	Glu	Gly	Pro	Pro	Leu	Phe	Val	Arg	
50						55				60						
Val	Cys	Pro	Lys	Leu	Arg	Gly	Ser	Gln	Leu	Pro	Xaa	Pro	Ala	Pro	Arg	
65					70					75					80	
Asn	Cys	Pro	Pro	Gly	Pro	Thr	Val	Val	Glu	Thr	Pro	Leu	Lys	Lys	Pro	
				85					90					95		
Lys	Arg	Ala	Gly	Gly	Gly	Pro	Ser	Pro	Trp	Trp	Thr	Cys	Ala	Pro	Gly	
			100					105					110			
Ser	Ser	Leu	Ser	Ser	Cys	Cys	Cys	Trp	Ala	Val	Pro	Leu	Trp	Trp	Ser	
		115					120					125				
Ala	Ser	Gly														
		130														

<210> 61  
 <211> 18  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 12  
 <223> Xaa = Any Amino Acid

<400>	61															
Gly	Cys	Arg	Ser	Thr	Gly	Pro	Gln	Pro	Thr	Pro	Xaa	Gly	Gly	Arg	Arg	
1				5					10					15		
Arg	Pro															

<210> 62  
 <211> 98  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Deduced amino acid sequence using the three possible ORF of human Delta contigs

<220>  
 <221> VARIANT  
 <222> 4, 19, 36, 48, 75  
 <223> Xaa = Any Amino Acid

<400>	62															
Thr	Thr	Trp	Xaa	Thr	Ala	Ser	Val	Arg	Arg	Thr	Ser	Gln	Ser	Ala	Ser	
1				5					10					15		
Ser	Gly	Xaa	Arg	Arg	Ser	Arg	Thr	Pro	Thr	Arg	Arg	Arg	Thr	Ser	Thr	
			20					25					30			
Gly	Thr	Thr	Xaa	Pro	Thr	Arg	Met	Ala	Ser	Arg	Pro	Ala	Thr	Gln	Xaa	
		35				40						45				
Trp	Thr	Ile	Thr	Ser	Cys	Arg	Thr	Ser	Arg	Val	Thr	Thr	Pro	Pro	Ser	
50					55				60							
Gly	Thr	Arg	Thr	Ala	Ser	Val	Thr	Pro	Ser	Xaa	Ser	Pro	Arg	Ala	Pro	
65				70					75						80	

Gln Gly Arg Arg Arg Cys Pro Pro Thr His Thr Gln Gly Val Glu Glu  
85 90 95  
Ala Ser

<210> 63  
<211> 33  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<220>  
<221> VARIANT  
<222> 16, 17, 22, 26, 30  
<223> Xaa = Any Amino Acid

<400> 63  
Lys Lys Lys Ala Gly Leu Arg Ala Cys Ser Thr Phe Lys Arg Gln Xaa  
1 5 10 15  
Xaa Tyr Lys Ser Val Xaa Val Ile Ser Xaa Gly Gly Arg Xaa Thr Ala  
20 25 30  
Ser

<210> 64  
<211> 22  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Deduced amino acid sequence using the three  
possible ORF of human Delta contigs

<220>  
<221> VARIANT  
<222> 2, 6, 8, 10, 13, 14, 19  
<223> Xaa = Any Amino Acid

<400> 64  
Glu Xaa Glu Val Val Xaa Trp Xaa Leu Xaa Leu Glu Xaa Xaa Pro Arg  
1 5 10 15  
Ile Pro Xaa Ser Lys Phe  
20

<210> 65  
<211> 192  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 65  
Gly Phe Thr Trp Pro Gly Thr Phe Ser Leu Ile Ile Glu Ala Leu His

1				5					10					15		
Thr	Asp	Ser	Pro	Asp	Asp	Leu	Ala	Thr	Glu	Asn	Pro	Glu	Arg	Leu	Ile	
			20					25					30			
Ser	Arg	Leu	Ala	Thr	Gln	Arg	His	Leu	Thr	Val	Gly	Glu	Glu	Trp	Ser	
		35					40					45				
Gln	Asp	Leu	His	Ser	Ser	Gly	Arg	Thr	Asp	Leu	Lys	Tyr	Ser	Tyr	Arg	
	50					55					60					
Phe	Val	Cys	Asp	Glu	His	Tyr	Tyr	Gly	Glu	Gly	Cys	Ser	Val	Phe	Cys	
65					70					75					80	
Arg	Pro	Arg	Asp	Asp	Ala	Phe	Gly	His	Phe	Thr	Cys	Gly	Glu	Arg	Gly	
			85						90					95		
Glu	Lys	Val	Cys	Asn	Pro	Gly	Trp	Lys	Gly	Pro	Tyr	Cys	Thr	Glu	Pro	
			100					105					110			
Ile	Cys	Leu	Pro	Gly	Cys	Asp	Glu	Gln	His	Gly	Phe	Cys	Asp	Lys	Pro	
		115					120					125				
Gly	Glu	Cys	Lys	Cys	Arg	Val	Gly	Trp	Gln	Gly	Arg	Tyr	Cys	Asp	Glu	
	130					135					140					
Cys	Ile	Arg	Tyr	Pro	Gly	Cys	Leu	His	Gly	Thr	Cys	Gln	Gln	Pro	Trp	
145					150					155					160	
Gln	Cys	Asn	Cys	Gln	Glu	Gly	Trp	Gly	Gly	Leu	Phe	Cys	Asn	Gln	Asp	
			165					170						175		
Leu	Asn	Tyr	Cys	Thr	His	His	Lys	Pro	Cys	Lys	Asn	Gly	Ala	Thr	Cys	
			180					185					190			

<210> 66  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Composite human delta (H-Delta-1) amino acid  
 sequence

<400> 66  
 Thr Asn Thr Gly Gln Gly  
 1 5

<210> 67  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Composite human delta (H-Delta-1) amino acid  
 sequence

<400> 67  
 Lys Asn Gly Gly Ser Leu Thr Asp Leu  
 1 5

<210> 68  
 <211> 157  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Composite human delta (H-Delta-1) amino acid



# sequence

```

<400> 68
Glu Asn Ser Tyr Ser Cys Thr Cys Pro Pro Gly Phe Tyr Gly Lys Ile
 1          5          10          15
Cys Glu Leu Ser Ala Met Thr Cys Ala Asp Gly Pro Cys Phe Asn Gly
          20          25          30
Gly Arg Cys Ser Asp Ser Pro Asp Gly Gly Tyr Ser Cys Arg Cys Pro
          35          40          45
Val Gly Tyr Ser Gly Phe Asn Cys Glu Lys Lys Ile Asp Tyr Cys Ser
 50          55          60
Ser Ser Pro Cys Ser Asn Gly Ala Lys Cys Val Asp Leu Gly Asp Ala
65          70          75          80
Tyr Leu Cys Arg Cys Gln Ala Gly Phe Ser Gly Arg His Cys Asp Asp
          85          90          95
Asn Val Asp Asp Cys Ala Ser Ser Pro Cys Ala Asn Gly Gly Thr Cys
          100          105          110
Arg Asp Gly Val Asn Asp Phe Ser Cys Thr Cys Pro Pro Gly Tyr Thr
          115          120          125
Gly Arg Asn Cys Ser Ala Pro Ala Ser Arg Cys Glu His Ala Pro Cys
          130          135          140
His Asn Gly Ala Thr Cys His Glu Arg Gly His Arg Tyr
145          150          155

```

```

<210> 69
<211> 12
<212> PRT
<213> Artificial Sequence

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```

<220>
<223> Composite human delta (H-Delta-1) amino acid
sequence

```

```

<400> 69
Cys Glu Cys Ala Arg Ser Tyr Gly Gly Pro Asn Cys
 1          5          10

```

```

<210> 70
<211> 5
<212> PRT
<213> Artificial Sequence

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<220>
<223> Composite human delta (H-Delta-1) amino acid
sequence

```

```

<400> 70
Phe Leu Leu Pro Glu
 1          5

```

```

<210> 71
<211> 4
<212> PRT
<213> Artificial Sequence

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<220>
<223> Composite human delta (H-Delta-1) amino acid
sequence

```

<400> 71  
Pro Pro Gly Pro  
1

<210> 72  
<211> 25  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 72  
Leu Leu Leu Gly Cys Ala Ala Val Val Val Cys Val Arg Leu Arg Leu  
1 5 10 15  
Gln Lys His Arg Pro Pro Ala Asp Pro  
20 25

<210> 73  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 73  
Arg Gly Glu Thr Glu Thr Met Asn Asn Leu  
1 5 10

<210> 74  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 74  
Asn Cys Gln Arg Glu Lys Asp Ile Ser Val Ser Ile Ile Gly  
1 5 10

<210> 75  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 75  
Thr Gln Ile Lys Asn Thr Asn Lys Lys Ala Asp Phe His Gly Asp His  
1 5 10 15

<210> 76  
<211> 11  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 76  
Ala Asp Lys Asn Gly Phe Lys Ala Arg Tyr Pro  
1 5 10

<210> 77  
<211> 26  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 77  
Val Asp Tyr Asn Leu Val Gln Asp Leu Lys Gly Asp Asp Thr Ala Val  
1 5 10 15  
Arg Asp Ala His Ser Lys Arg Asp Thr Lys  
20 25

<210> 78  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 78  
Gln Pro Gln Gly Ser Ser Gly Glu Glu Lys Gly Thr Pro  
1 5 10

<210> 79  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 79  
Pro Thr Leu Arg  
1

<210> 80  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Composite human delta (H-Delta-1) amino acid  
sequence

<400> 80  
Arg Lys Arg Pro  
1

<210> 81  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Degenerated oligo as primer

<220>  
<221> VARIANT  
<222> 6, 12, 18, 21  
<223> n = I (Inosine)

<400> 81  
ttcggnttya cntggccngg nac

23

<210> 82  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Degenerated oligo as primer

<220>  
<221> VARIANT  
<222> 3, 9, 12, 15  
<223> n = I (Inosine)

<400> 82  
tcnatgcang tncncrctt

20

<210> 83  
<211> 8  
<212> PRT  
<213> Drosophila

<400> 83  
Phe Gly Phe Thr Trp Pro Gly Thr  
1 5

<210> 84  
<211> 7  
<212> PRT

<213> Drosophila

<400> 84

Asn Gly Gly Thr Cys Ile Asp  
1 5

<210> 85

<211> 12

<212> PRT

<213> Drosophila

<400> 85

Ser Ile Pro Pro Gly Ser Arg Thr Ser Leu Gly Val  
1 5 10

<210> 86

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer 1 for PCR

<220>

<221> VARIANT

<222> 3, 9, 15, 18, 21

<223> n = I (Inosine)

<400> 86

ggnttcacnt ggccnggnac ntt

23

<210> 87

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer 2 for PCR

<220>

<221> VARIANT

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20 25 30  
Phe His Ser Asp Asn Ser Asp Lys Asn Gly Tyr Lys Val Arg Tyr Pro  
35 40 45  
Ser Val Asp Tyr Asn Leu Val His Glu Leu Lys Asn Glu Asp Ser Val  
50 55 60  
Lys Glu Glu His Gly Lys Cys Glu Ala Lys Cys Glu Thr Tyr Asp Ser  
65 70 75 80  
Glu Ala Glu Glu Lys Ser Ala Val Gln Leu Lys Ser Ser Asp Thr Ser  
85 90 95  
Glu Arg Lys Arg Pro Asp Ser Val Tyr Ser Thr Ser Lys Asp Thr Lys  
100 105 110  
Tyr Gln Ser Val Tyr Val Ile Ser Glu Glu Lys Asp Glu Cys Ile Ile  
115 120 125  
Ala